



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,623	03/20/2007	Viktor Reis	09244W-US	5395
30680 7590 12/24/2009 DEERE & COMPANY ONE JOHN DEERE PLACE MOLINE, IL 61265				
EXAMINER				
AUNG, SAN M				
ART UNIT		PAPER NUMBER		
3657				
MAIL DATE		DELIVERY MODE		
12/24/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/581,623

Applicant(s)

REIS ET AL.

Examiner

SAN AUNG

Art Unit

3657

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/22)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

This communication is a Second Office Action Final rejection on the merits.

Claims 1-10, as originally filed, are currently pending and have been considered below.

Response to Amendment

The amendment filed September 30, 2009 has been entered. Claims 1-10 have been cancelled and new claims 11-23 have been entered. Therefore, claims 11-23 are now pending in the application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 11-15, 21-22** are rejected under 35 U.S.C. 102(b) as being anticipated by Marquart (US Patent 4,915,193).

As per claim 11, Marquart discloses Air/Oil Control for Transmission Lubrication comprising:

a first gearbox section (16), wherein the first gearbox section comprises a first gearbox assembly (Figure 1);

a second gearbox section (14), wherein the second gearbox section comprises a second gearbox assembly (Figure 1), and the first and second gearbox sections cooperate to form part of a lubricant sump (Figure 1); and

a lubricant (24) encapsulated at least partially in the first and second gearbox sections (24, Figure 1), wherein more lubricant is retained in a one of the first and second gearbox sections that is operating at a lower speed relative to an other of the first and second gearbox sections that is operating at a higher speed (Column 2, Lines 3-11, Figure 1).

As per claim 12, Marquart discloses the first gearbox assembly is a differential assembly, and the second gearbox assembly is a power take-off assembly;

the differential assembly comprises a ring gear (16, 18, Column 2, Lines 1-3, Figure 1), and the ring gear rotates about an axis (Attached figure);

the second gearbox section comprises a bearing plate defined by a plane (Attached figure); and

the axis and the plane are parallel to one another (Attached figure and figure 1).

As per claim 13, Marquart discloses the separator (Attached figure) is mounted to at least one of the first and second gearbox sections (Attached figure and figure 1), and the separator extends from the base of the gearbox arrangement up to at least the height of a gearbox shaft (Attached figure and figure 1).

As per claim 14, Marquart discloses the separator comprises a return (20, oil passage 20 communicate between two chambers, Column 2, Lines 3-5, Figure 1).

As per claim 15, Marquart discloses the return is in the form of a through-hole (20, Column 2, Lines 3-5, Figure 1).

As per claim 21, Marquart discloses a guide contained within at least one of the first and second gearbox sections (Shafts 56 and 64 are attached to the separator and

go through the wall so that it is inherently disclose that separator must include the guide to rotate the shaft, Figure 1).

As per claim 22, Marquart discloses an air pump (28) in communication with the main gearbox portion to force lubricant located in the main gearbox portion into a lubricant channel and into the first and second gearbox sections (Column 2, Lines 45-66, Figures 1 and 2).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 16-17, and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Marquart (US Patent 4,915,193) as applied to claims 11, 12, 13 and 14 above, and further in view of Rimkus et al. (US Patent 6,718,847 B2).

As per claim 16, Marquart discloses all the structural elements of the claimed invention but fails to explicitly disclose the return is in the form of a return channel.

Rimkus et al. discloses Pressure-Release Device for a Transmission Housing comprising:

the return is in the form of a return channel (50, Figure 1).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the transmission lubrication system of the Marquart to include the oil return lines between two chamber and which is formed as channel as

taught by Rimkus et al. in order to provide rapid compensation of the fluid after transmission has been turn off.

As per claim 17, Marquart discloses all the structural elements of the claimed invention but fails to explicitly disclose a housing seal, wherein the housing seal is interposed between the separator and the gearbox housing.

Rimkus et al. discloses a housing seal, wherein the housing seal is interposed between the separator and the gearbox housing (44, 46, Figure 1).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the transmission lubrication system of the Marquart to include the housing seal and which is interposed between the separator and the gearbox housing as taught by Rimkus et al. in order to retain necessary oil level in each chamber when transmission is operating and also provide rapid compensation of the fluid after transmission has been turn off.

As per claim 23, Marquart discloses;

a separator (Attached figure) comprising a return (20), wherein the separator is mounted to at least one of the first and second gearbox sections (Figure 1), and the separator extends from the base of the gearbox arrangement up to at least the height of a gearbox shaft (Figure 1);

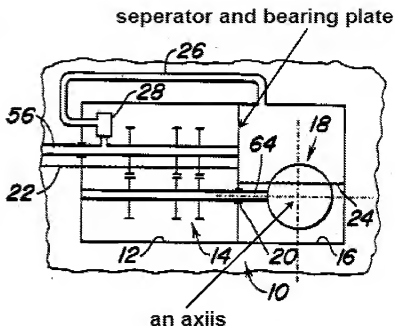
a guide contained within at least one of the first and second gearbox sections (Shafts 56 and 64 are attached to the separator and go through the wall so that it is inherently disclose that separator must include the guide to rotate the shaft, Figure 1);

an air pump (28) in communication with the main gearbox portion to force lubricant located in the main gearbox portion into a lubricant channel and, ultimately, into the first and second gearbox sections (Column 2, Lines 45-66, Figures 1 and 2).

However, Marquart fails to explicitly disclose that a housing seal, wherein the housing seal is interposed between the separator and the gearbox housing.

Rimkus et al. discloses a housing seal (44, 46), wherein the housing seal is interposed between the separator and the gearbox housing.

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the transmission lubrication system of the Marquart to include the housing seal and which is interposed between the separator and the gearbox housing as taught by Rimkus et al. in order to retain necessary oil level in each chamber when transmission is operating and also provide rapid compensation of the fluid after transmission has been turn off.



5. **Claims 18-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Marquart (US Patent 4,915,193) as modified by Rimkus et al. (US Patent 6,718,847 B2) as applied to claims 11, 13, 17, and 17 above, and further in view of Gibbons (US Patent 4,940,394).

As per claims 18, 19 and 20, Marquart as modified by Rimkus et al. discloses all the structural elements of the claimed invention but fails to explicitly disclose housing seal is a steel strip (claim 18), rubber (claim 19) and plastic (claim 20).

Gibbons discloses Adjust Wearplates Rotary Pump comprising;

Oil seal with combination of steel (gland 38), Rubber (O-ring, 37), and plastic (slinger 39), (Column 3, Lines 51-59, Figure 2).

It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the transmission lubrication system of the Marquart as modified by Rimkus in order to operate the transmission constant pressure individually in two chambers and maintain the necessary oil level of each chamber.

Response to Arguments

6. Applicant's arguments with respect to claim 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAN AUNG whose telephone number is (571)270-5792. The examiner can normally be reached on Mon-to- Fri 7:30 am- to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

San m Aung

/Robert A. Siconolfi/
Supervisory Patent Examiner, Art
Unit 3657